

A STUDY OF THE NEGOTIATION STYLES IN
MALAYSIAN CONSTRUCTION INDUSTRY

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the requirements for the
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CERTIFICATION OF APPROVAL

A STUDY OF THE NEGOTIATION STYLES IN MALAYSIAN CONSTRUCTION INDUSTRY

by

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Approved by:



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CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and that the original work contained herein have not been undertaken or done by unspecified sources or persons.



(AZZUIN BT AMER)

ABSTRACT

A study of the negotiation styles in Malaysian construction industry involves the participation of the professionals such as project manager and engineer from construction industry in Peninsular Malaysia. The nature of construction industry contributes to the conflict condition especially in project management. Different technical background from different organization produces different point of view that may create the crippling conflict, influence the negative decision making process and cause lack of mutual agreement among the parties. In fact, negotiation is the most efficient way to overcome the conflict. By understanding the other negotiator's style, it will help professionals to solve conflict during negotiation. This study is proposed to identify different styles of negotiation in construction industry in Peninsular Malaysia and determine the most dominant style among the professionals.

The approaches of negotiation style in this study proved to be quite satisfactory when conduct the survey method among the professionals. Before conduct the survey, design good questionnaire is essential. Pilot Survey is conducted among the lecturers and project manager in UTP to make sure the questionnaire is free from error before randomly sent to the professionals. The questionnaires are sent to the respondent and get the feedback within 2 months.

As a result, the most dominant negotiation style that had been applied by the professionals can be obtained from the descriptive statistics using mean and variance of the data. Instead, the negotiation outcomes are influenced by the styles and proved by analytical analysis using multiple regression analysis. By understanding the styles, it will be taken as the benchmark for the next future during the negotiation.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Today, engineering projects such as construction is rapidly growth in Malaysian construction industry. Construction daily routine is full with collaboration, conflict and negotiation. Professionals seat together in one table to deal the project with other parties and bring up their expertise. Negotiation needs to put as first attempt to resolve the dispute and grab the opportunities to both parties. There are a few conditions which need the negotiation such as technical negotiation, which basically during the bid the tender and modification of technical structure, and cost negotiation during the cost estimation between the client, consultant and contractor.

This study basically proposed to identify the multiple styles of negotiation in Malaysian construction industry and determine the most dominant style in order to improve the negotiation style among the professional in Malaysia. Questionnaire is design regarding the criteria requirement in construction field such as the experiences gaining in construction and the attitudes while involve in negotiation.. To test the effectiveness of the questionnaire, Pilot Survey is conduct among the small group of population in Universiti Teknologi PETRONAS (UTP) such as lectures and project manager that have experienced in construction industry. 150 samples are expected to send to the respondents with random sampling method. Then survey is conduct in construction industry in Malaysia by sending mail. At least 30 feedbacks collected to analyze and the most dominant style of negotiation can be identified.

1.2 PROBLEM STATEMENT

Different technical background and organization cause different opinion between professionals such as project manager and engineer toward the goal of successive collaboration in construction industry in Malaysia. As world become smaller, the professional not only needs to deal with different background but also difficulties of working across the large distances for extended periods of time, with varying of cultural background, ideological and also negotiation style. Variety of negotiation style in construction need to be study and research as it will become the root of the successful collaboration. Poor negotiation in construction practice may arise:

i. Create the crippling conflict decision

Professionals are expert in their work field and bring their expertise to solve the problem and cause the argument between parties. Instead, each of team members compete to implement the objective that provides the maximum benefits to their organization.

ii. Influence the decision making process

Professionals have different strategies and tactics in interaction between the parties involved and also have the variation of negotiation styles and skills of problem solving. This situation may contribute to the negative decision making.

iii. Lack of mutual agreement

Both parties compete to win the negotiation and achieve the higher benefit compared to others may initiate the lack of mutual agreement. Besides, the objective of the agreement is not accomplished.

1.3 OBJECTIVES

Principle objectives for this research are:

- i. To identify different styles of negotiation among construction professionals in the construction industry in Peninsula Malaysia.
- ii. To determine the most dominant negotiation styles for construction professional such as architect, project manager, quantity surveyor, engineer and client.

1.4 SCOPE OF STUDY

For this research study, the scope of study is the negotiation style in construction mainly in project management in Peninsular Malaysia construction industry. Different types of negotiation style are identified using the survey method that participated by professionals such as project manager and engineer. Negotiation is the key of successful collaboration so the suitable style and methodology is applied. In this research, survey is conducted twice; first is Pilot Survey and followed by survey in large population. Pilot survey is conducted for small respondent, recommended in UTP to comment and suggest the questionnaire. The questionnaire of the survey is due to negotiation style and outcome. Furthermore, study about design questionnaire is the basis method of survey because the questionnaire is sent to the outsider respondent. The feedback will be collected within one month and then will be analyze using statistical analysis and presented in graphic to show the most dominant negotiation style in Malaysian construction industry.

CHAPTER 2

LITERATURE REVIEW

2.1 BACKGROUND THEORY

2.1.1 Terminology

- i. Negotiate
 - To talk to in order to decide or agree about something or
 - To get over, past or through something difficult
- ii. Negotiation
 - Discussion at which people try to decide or agree something
- iii. Negotiation style
 - Design, make, or arrange in a particular way of dealing an agreement or dispute.
- iv. Construction
 - The act or method of building or making something constructed such as building.

(Concise Oxford Dictionary, 10th edition)

2.1.2 Negotiation

Negotiation is a dynamic process of adjustment or dealing between two or more parties, bring their own mutually conflicting objective with intention to achieve success agreement in order to grab the maximum benefit to their parties. (P.D.V. Marsh, 2001). In this regard, both parties arrange their affair in commerce and everyday life, produce common grounds, adapt with the area with disagreement. (Brown and Marriot, 1999). Although there are a few possible methods, conflict always begins with negotiation before other methods are considered. (Hibberd and Newman, 1999). In fact, negotiation is the most convenient way to solve the dispute because it is informal, speedy and noncomplex in nature, instead help organization to achieve the successful collaboration.

2.1.3 Negotiation styles

Negotiation style refers to the characteristic way of particular negotiator to deal with others during a negotiation and collaboration. Different negotiation styles are caused by different background and experiences among the negotiators. Learning from other negotiator's style is an excellent way to increase success of purpose. (M.L. Smith, 1992).

2.1.4 Negotiation styles in construction

Negotiation style in construction is negotiating behavior used by professionals when negotiate the price and method of reimbursement. Negotiation in construction industry basically will involve different professionals from client and contractor. Both parties have their own priorities and negotiate with different styles to bid the contract and obtain maximum benefit to them.

In fact, when client open the contract for one project, they will invite selected contractors to review the project documentation due to its qualification to perform the work and indicate the costs and fees to complete the project on period time given by client. It implies flexibility when the client chooses the contractor on a basis other than low bid. Therefore, contractors do not only negotiate basis of low bid but also have to impress the client from their attractive negotiation style. From the open negotiation, client evaluates which contractor offer low bid, besides with better negotiation in review session. (D.W. Halpin, 2006).

2.2 PREVIOUS STUDY

2.2.1 Negotiation

Large-scale of engineering and architectural projects basically need high level of education and experience people from different professional disciplines such as project manager, engineer, architect, quantity surveyor and project planner. Variation of professionals typically comes from different background and organizations produce different behavior and point of view towards the successful collaboration.

The dissent nature of the construction industry contributes to the crippling conflict. In getting the conflict solves in a good condition, negotiation must be the first attempt taken. The most convenient negotiation usually represented by skilled negotiators that compete for their limited opportunity with maximum benefits to their organization. Skilled negotiators take note about others mistakes and take it as lesson. They also do the homework or early planning before play a main role in negotiation session. Most of the failure negotiator repeat common mistakes and negotiate poorly because lack of planning. Good negotiator start negotiates with own strategies style and adequate planning.

2.2.2 Problem and Solution

Most common problems in negotiation have been encountered and the checklist for each problem is presented for negotiators guideline. Negotiators need to start the negotiation with “win-win” style on purpose to set their mind and aim for the “win” only. Reluctant to change negotiation style will cause trouble to the organization. Besides, negotiators need to stick with one decision, with no “giveaway” choice without any reason from the opponent. (Smith, 1992). Instead of negotiating, no bargaining is allowed because negotiators have to press one’s interest to meet both parties needs. (Fisher and Ury, 1992).

Beside negotiation style, checklist is one way to make sure the negotiation is well-planning. Due to the capability of team member, no emotional member is allowed. It is important for negotiator to prepare a list of related issue that might be come out but remember not to bring up the weakness of own organization. Anticipate possible question that might be ask and prepare suitable answer. Each issue has their own price so negotiators need to take note of any changes or extra information during the negotiation. Backup information needs for each issue because client does not only choose the contractor basis on the low bidder, but also due to the best knowledgeable negotiators. (Smith, 1992).

2.2.3 Negotiation Methodology

Based on research about negotiation methodology for collaborative in large-scale engineering project (P. Mora, 1992), four issues are faced; domain dependent, implement objective, different strategies and tactics among the negotiators and limit within the traditional boundaries. Domain dependent mainly caused by different technical background, all of them bring up their expertise to solve the dispute. Objective for each negotiation must be on track for any decision making. Variety level of education and experience cause multiple strategies and tactics to grab the contract. In term of their negotiation skill, some of the negotiators unable to think out of the box because their mind is limited by the traditional boundaries and unable to change their old negotiation style.

Five methods had been approach (P. Mora, 1992) for better negotiation style to prevent any irrelevant issue for next negotiation. Generic negotiation model need the negotiator to divide the problem to its basic factor and analyze each part of it. Each negotiator has own negotiating position or set of requirement for negotiation settlement (Fisher and Ury, 1981). For game theory, negotiators have to work on the methodology of conflict dispute and planning the strategies to overcome the problem. Negotiation theory basically focuses on qualitative aspect of negotiation. Research stated that the behavior is the main character for alternative conflict resolution (Susskind et al, 1993) such as partnering, mediation and arbitration (Moore, 1986). Project delivery system mainly defines as temporary formal and informal between two parties within the project negotiation. Understanding between two parties can lead to development of negotiation methodology and alter negotiation structure. Next, for global collaboration, negotiator need to be well-rounded and prevent any close contact especially when deal with global negotiator.

2.2.4 Analytical Hierarchy Process

Analytical Hierarchy Process (AHP) had been proposed to overcome the conflict during negotiation especially due to method reimbursement. AHP is practically use for decision maker to identify the issues and set the priorities base on objective, knowledge and experience. In fact, AHP stress on interaction between decision elements and communication between problems and alternatives. Hierarchy divided into three parts; overall goal, decision criteria and decision alternative. All this elements must be rating according to the scale (1-9), then they weightage for each branch of hierarchy is multiplying. For each alternative, total weightage need to be added and the largest amount of weightage is the preferred choice. In real contract management, each alternative presented by demand, cost and benefit. Then the ratio of gain and loss is measured to estimate the best alternative chosen. The higher ratio is the better one. This method needs the mediator to calculate and incorporate in negotiation process. (Tabtabai and Thomas, 2004).

2.2.5 Relationship between Styles and Outcomes of Negotiation

More information in the literature regarding on research of Cheung et al (2005), investigate the relationship between negotiation styles and negotiation outcomes in Hong Kong construction industry. Five negotiation styles had been proposed; dominating, compromising, avoiding, obliging and integrating. But, the finding suggested that obliging, dominating and avoiding styles are less influential in achieving the objective. Though, result from survey stated that integrating style is found to be useful and practical approach to achieve functional negotiation outcome.

Based on Rosch (1988), he stated about taxonomy which is the system that relate the categories with one another by mean of class inclusion. For Cheung thesis, he extracts the factor matrix for negotiation outcomes and relates with the negotiation styles.

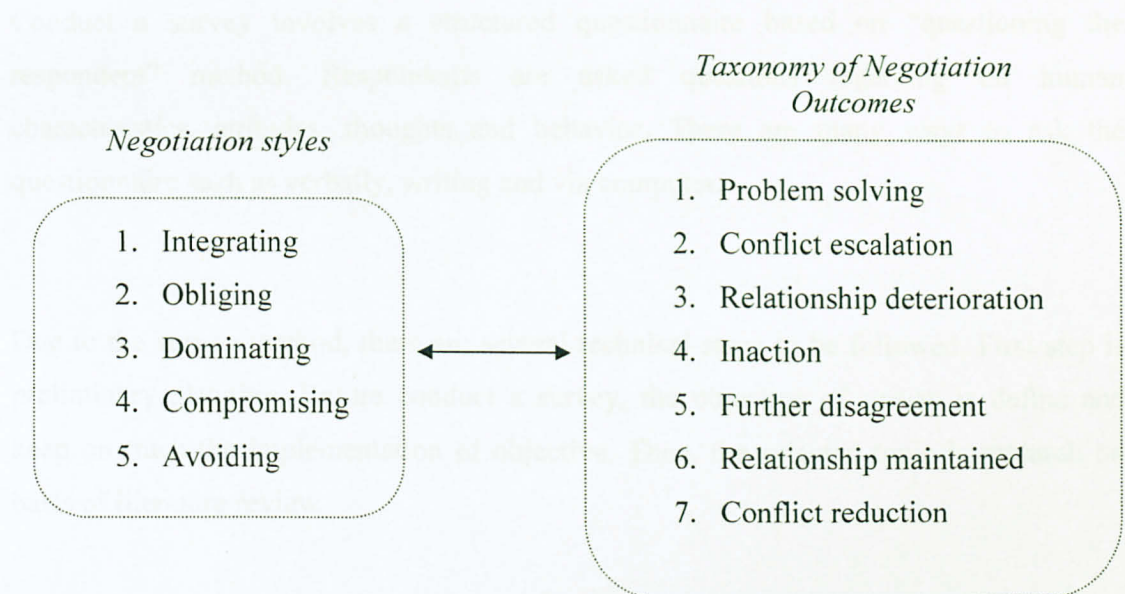


Figure 1 Overall Development of Taxonomies

CHAPTER 3

METHODOLOGY

3.1 SURVEY METHOD

Survey is the systematic collection and analysis data of selected information from all or part of a population. The statistical analysis based on survey data is used as reference for authority and beginning researcher in developing a new method besides the method that had been researched in the survey.

Conduct a survey involves a structured questionnaire based on “questioning the respondent” method. Respondents are asked questions regarding on human characteristics, attitudes, thoughts and behavior. There are many ways to ask the questionnaire such as verbally, writing and via computer.

Due to the survey method, there are several technical steps to be followed. First step is preliminary planning. Before conduct a survey, the objective of survey is define and keep on track the implementation of objective. Then, the selected topic is research on basis of literature review.

The basic criterion for conducting survey is design questionnaire. The questionnaire must be well-prepared and free from any error. To check the effectiveness of the questionnaire, Pilot Survey should be executed with the professionals from UTP such as lecturer and project manager. Their comment and suggestion must be discussed with the supervisor in case to modified the questionnaire. Instead of, the questionnaire should be easy to understand and no vague statement because the respondent might be come form different level of knowledge.

Before conduct survey,

Next, the method that used to conduct a survey is decided. There are four types of survey method; personal interviewing, telephone interviewing, mail survey and electronic survey. Basically in research, mail survey is chosen because this method can be used for screening as well as full survey and has drop-off or mail-back.

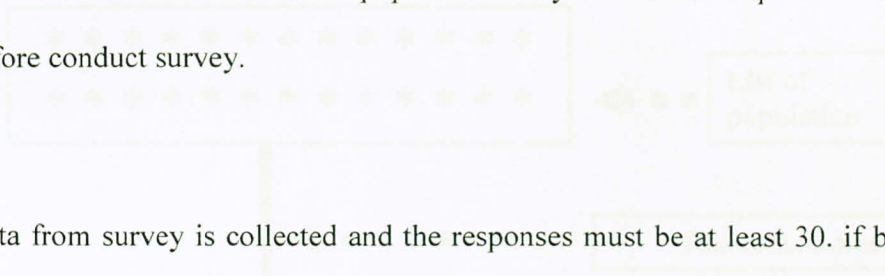
Results analysis and presented in graphs and The graphs must be clear and free from

Conduct a survey need the sample of population. Sample is a collection of things which is some part of a larger population and which is selected as representative of that population. The target population is the type of population that will be survey such as people, geographical areas, companies or any other discrete things. In this research, the sampling is simple random sampling where the entire sample has the equivalent chance to be chosen.

Conclusion

SAMPLING

Based on Central Limit Theory, minimum feedback from respondent for conducting survey is 30. Using chi-square test, square of 30 is 90, but in this research, sample that used to send is 150. To design the questionnaire, there are some criteria requirement; valid, reliable and unbiased. Then, pilot survey is conduct to test the effectiveness of the questionnaire within the small population. Any confusion in questionnaire is corrected before conduct survey.



Data from survey is collected and the responses must be at least 30. if below than that, interview survey is conducted. Data collection from the survey is analysis using statistical analysis and presented in graphic aid. The graphic must be clear and free from error to present the finding of overall research that had been done.

Figure 2 Simple Random Sampling

3.2 POPULATION AND SAMPLE

POPULATION

The population involve in this research are construction professionals such as Project Manager, Engineer, Architect and Quantity Surveyor in construction industry in Peninsular Malaysia.

3.3 SAMPLING

Sampling method use in this survey is simple random sampling where the sample taken randomly in a group selected. The entire sample has the same chance to be selected.

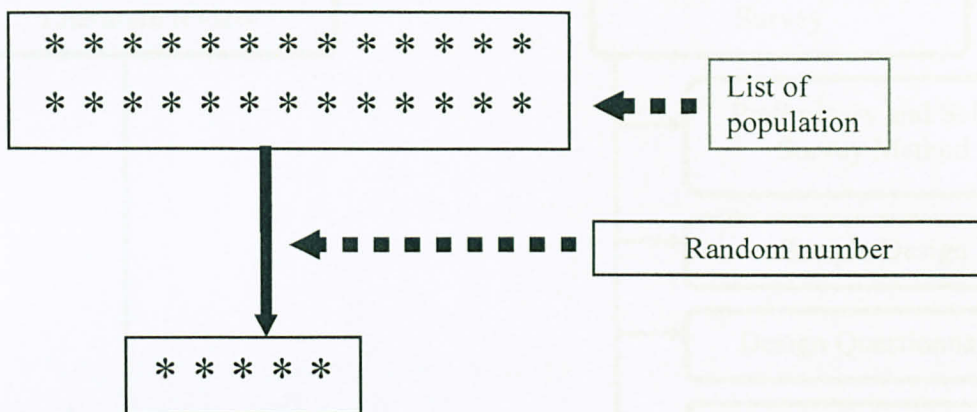


Figure 2 Simple Random Sampling

3.4 ANALYSIS

Data management and analysis using Statistical Analysis

3.5 FLOWCHART

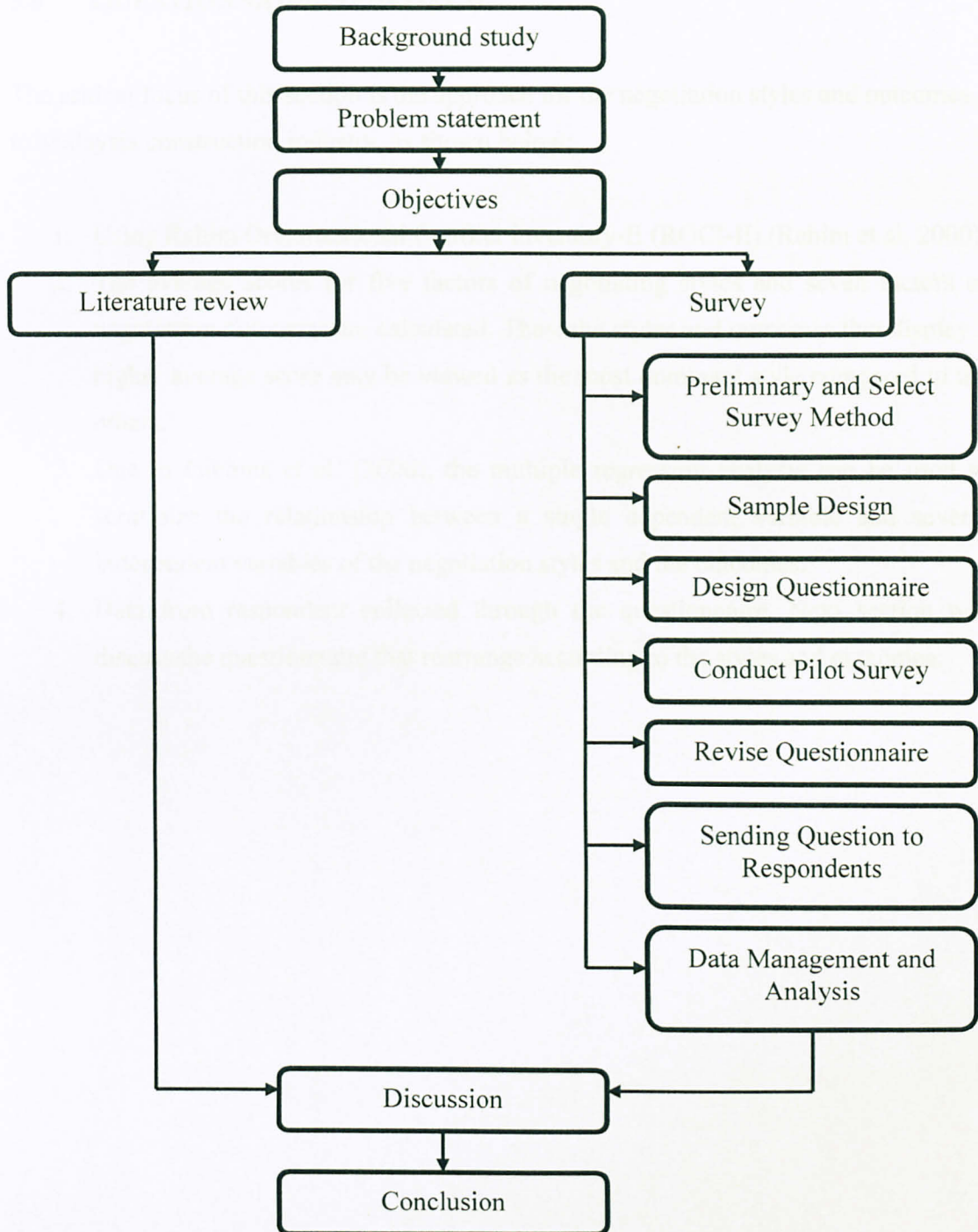


Figure 3 Flow Chart of Research

3.6 QUESTIONNAIRE APPROACH

The critical focus of this section is the approach for the negotiation styles and outcomes in Malaysia construction industry, as shown below:

1. Using Rahim Organizational Conflict Inventory-II (ROCI-II) (Rahim et al, 2000).
2. The average scores for five factors of negotiating styles and seven factors of negotiation outcomes are calculated. Thus, the styles and outcomes that display a higher average score may be viewed as the most dominant style compared to the others.
3. Due to Gibbins et al. (2000), the multiple regression analysis can be used to scrutinize the relationship between a single dependent variable and several independent variables of the negotiation styles and the outcomes.
4. Data from respondent collected through the questionnaire. Next section will discuss the questionnaire that rearrange according to the styles and outcomes.

3.6.1 Negotiation Styles Questionnaire

Table 1 Negotiation Styles Questionnaire

Collaborating

No	Question
1	I use my influence to get my ideas accepted
5	I try to work with the other to find solutions to a problem which satisfy our expectation
12	I exchange accurate information with the other so that we can solve the problem together
22	I try to bring all concerns out in the open so that the issues can be resolved in the best possible way
23	I collaborate with the other to come up with decisions acceptable to us
28	I try to work with the other for a proper understanding of a problem

Accommodating

No	Question
2	I generally try to satisfy the needs of the other
3	I attempt to avoid being "put on the spot" and try to keep my conflict with the other to myself
10	I usually try to accommodate the wishes of the other
11	I give in to the wishes of the other
13	I usually allow concessions to the other
19	I often go along with the suggestion of the other
24	I try to satisfy the expectations of the other

Competing

No	Question
8	I try to investigate an issue with the other to find a solution that will be acceptable to everyone involved
9	I use my authority to make a decision in my favor
18	I use my expertise to make a decision in my favor
21	I am generally firm in pursuing my side of the issue
25	I sometimes use my power to win a competitive situation

Compromising

No	Question
4	I try to integrate my ideas with the other to come up with a decision jointly
7	I try to find a middle course to resolve an impasse
14	I usually propose a middle ground to break deadlocks
15	I negotiate with the other so that a compromise can be reached
20	I use 'give and take' so that a compromise can be reached
27	I try to avoid unpleasant exchanges with the other

Avoiding

No	Question
6	I usually avoid open discussion of my differences with the other
16	I try to stay away from disagreement with the other
17	I avoid an encounter with the other
26	I try to keep my disagreements with the other to myself to avoid hard feelings

3.6.2 Negotiation Outcomes Questionnaire

Table 2 Negotiation Outcomes Questionnaire

Problem Solving

No	Question
1	The solution found satisfied the goals and needs of both parties
2	Optimal and creative solution to problem was found
11	Less conflict-laden environment was produced
12	More behavioral compliance with both parties was achieved
16	The levels of conflict were reduced

Relationship Maintained

No	Question
9	Some of each party's needs were satisfied, but not all of them
10	Relationship between the parties was kept intact for future interactions

Conflict Reduction

No	Question
17	The agreement was difficult to reach
20	Less future disputes were likely made

Conflict Escalation

No	Question
7	There was lack of basic information needed to construct solutions to the conflicts
8	The dispute was difficult to resolve
18	A higher level of ongoing conflict was experienced
19	More task conflict was experienced



Relationship Deterioration

No	Question
13	I ignored the needs and expectations of the other party
14	Solution development was likely to be sub-optimal, resulting in wasted resources
15	Task conflict was turned into relationship conflict
21	The negotiation process was a one-side decision-making process

Inaction

No	Question
5	The issue was postponed until a better time
6	I withdrew from a threatening situation

Further Disagreement

No	Question
3	There were further disagreements or escalations in conflict
4	Stalemate was aroused

3.7 DATA COLLECTION

A questionnaire survey is designed based on ROCI-II that is properly modified for this research under the guidance of advisor, in order to collect related data and analyze the questionnaire. Two types of data are combined in this questionnaire, which are; indicator for negotiation styles and indicator for negotiation outcomes basically focus on the recent negotiation completed by the respondents. The section B part I, it consists of 28 question on style attributes that modified to suit the construction context (Cheung, et al, 2006). For part II, the question is indicating the possible negotiation outcomes under the influence of the five negotiation style suggested by Blake and Mouton's (1964).

Each of questionnaires is included with the scale of agreement that filled up by the respondent due to their opinion. The scale that had been used is Likert-Scale from 1 to 5 due to the degree of agreement. Number 1 representing "strongly disagree", number 5 representing "strongly agree" while number 3 stand for "agree". The respondents were asked to assess the degree of achievement that will indicate their behavior toward the appropriate styles and outcomes from the styles used. A total of 148 questionnaires were sent to construction professional in construction industry in Peninsular Malaysia. The list was compiled by identifying key personnel from the government and professional directories and web site of companies.

3.8 GANT CHART

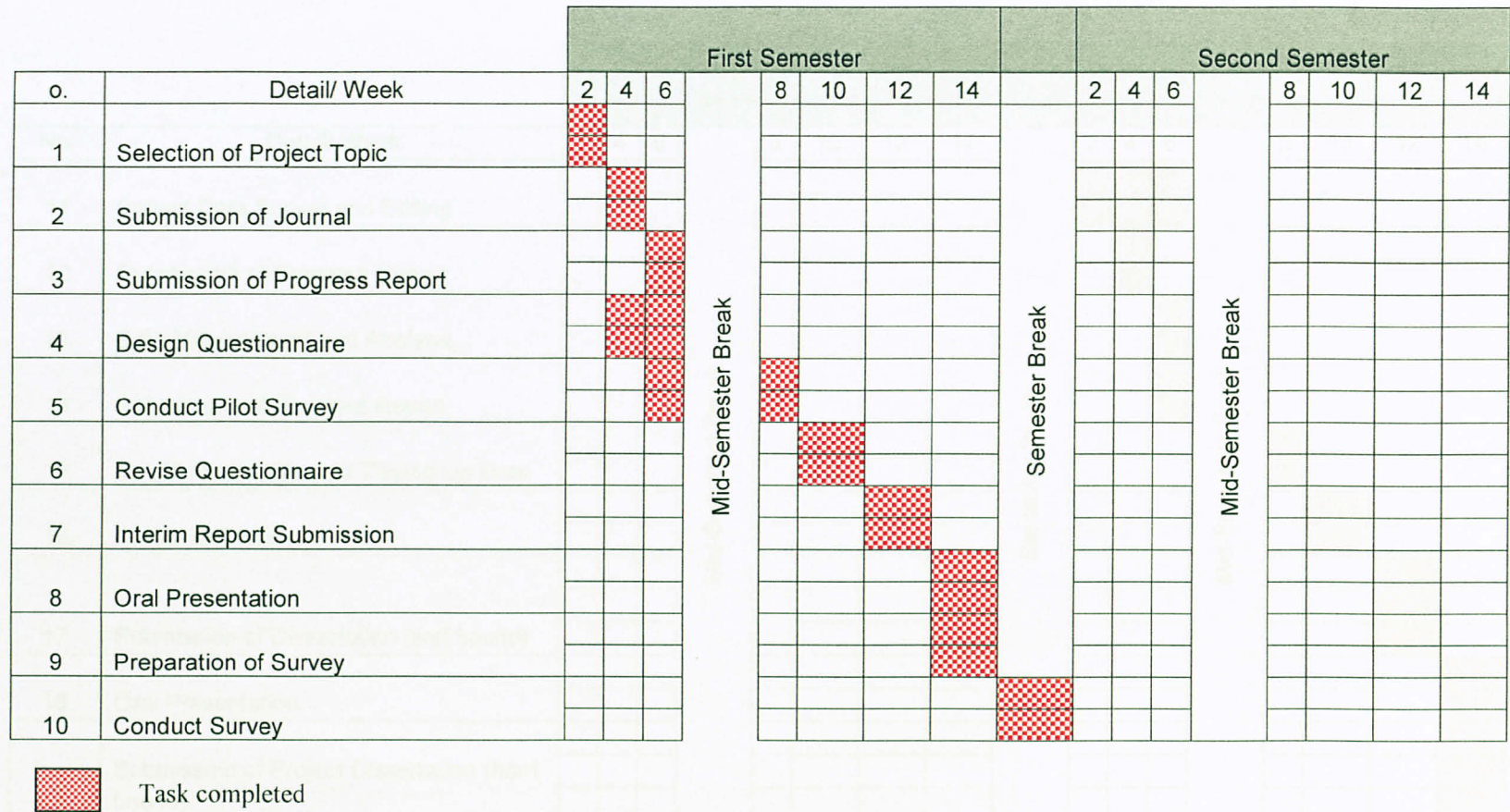


Figure 4 Suggested Milestones for Two Semesters of Final Year Project

		First Semester									Second Semester										
No.	Detail/ Week	2	4	6	Mid-Semester Break	8	10	12	14	Semester Break	2	4	6	Mid-Semester Break	8	10	12	14			
11	Collect Data Survey and Editing																				
12	Submission of Progress Report																				
13	Data Management and Analysis																				
14	Submission of Progress Report																				
15	Data Presentation and Tidying Up Data																				
16	Poster Exhibition																				
17	Submission of Dissertation (soft bound)																				
18	Oral Presentation																				
19	Submission of Project Dissertation (hard bound)																				



Task completed

Figure 4 Suggested Milestones for Two Semester of Final Year Project



CHAPTER 4

ANALYSIS QUESTIONNAIRE

4.1 TYPE OF NEGOTIATION STYLES

The literature states numerous negotiation styles and associated measurement instruments—most of them being inconsistent and not integrated. For example, Putnam and Wilson (1982) identify three negotiation styles—control, solution-oriented and nonconfrontation modes. These three negotiation styles are similar to those identified by authors such as Mnookin et al (2000) and Weider-Hatfield (1988). Other authors specify five negotiation styles—integrating, obliging, dominating, avoiding and compromising (Rahim 1983) or collaborating, compromising, competing, accommodating and avoiding (Thomas and Kilmann 1987).

Besides, common among those and the various other typologies are two distinct styles (Holley, et al (2005):

- a) An integrative negotiation style (Mutual Gain Bargaining approaches)

Negotiator is linked to a problem solving orientation in which trust, affinity, and joint gain are emphasized. Relying on open communication, trust, and mutual respect, negotiators focus on fulfilling the mutual interests of both parties. In the negotiation literature, this orientation is referred to as Cooperatives.

b) The distributive negotiation style (Distinctive Bargaining Approaches)

Negotiator is linked to a competitive orientation in which power, control, and individual gain are emphasized. This negotiation is approached by a win-lose exercise where the gains of one party must come at the expense of the other party. The sole focus of the negotiator is to maximize his/her own outcomes. In the negotiation literature, this orientation is referred to as *Assertiveness*.

In addition, the integrative and distributive styles above are constructed as below:

Integrative Dimension = Collaborating Style – Avoiding Style

Distributive Dimension = Competing Style – Accommodating Style

Negotiators that exhibit *Assertiveness* tendencies are more likely to engage in Distributive Bargaining behavior while negotiators that are high in *Cooperativeness* are more likely to use a Mutual Gain Bargaining approach. Thus, this self-assessment will help to examine the levels of *Assertiveness* versus *Cooperativeness* (Holley, et al, 2005).

4.2 VARIABLE OF NEGOTIATION STYLES

There are patterns in individual behavior that reappear in various negotiation situations through the mechanism of predisposition toward particular courses of conduct (Gilkey and Greenhalgh 1986). On the other hand, Hall (1969) assumes negotiation behaviour is highly influenced by the situation (i.e., interaction between the negotiating parties), Rahim (1983) by the target (i.e., superior, subordinate, peer), and Putnam and Wilson (1982) by both the situational context and the target.

Due to the negotiation literature (Matthews, 1998; Friend and Cook, 1992; Johnson and Johnson, 1991), the measurement of Assertiveness and Cooperativeness requires the consideration of five distinct negotiation styles that are similar with Rahim (1983) that include integrating, obliging, and dominating for collaborating, accommodating, and competing respectively. The five negotiation styles are:

1. Collaborating

Acting with a high concern for self and others with the objective of achieving an outcome that satisfies both parties requires collaboration and open exchange of information. The nature of the integrating style, therefore, is one of being both assertive and cooperative. It follows that a mixture of tactics is employed in the integrating style, as resolution requires identifying and analyzing the various differences between the parties and the exploration of new solutions.

2. Accommodating

A accommodating style results in a win-lose outcome (Rahim and Magner 1995). Being unassertive and cooperative indicates the accommodate style, where the outcome is a lose-win situation (Rahim and Magner 1995). Here, a person acts with a low concern for self and a high concern for others, emphasizing shared aims and de-emphasizing differences (Rahim and Magner 1995).

3. Competing

A person whose actions in a conflict situation are determined by a high regard for self and a low concern for others (being assertive and uncooperative) is considered to be using a dominating style (Rahim and Magner 1995).

4. Compromising

A give and take attitude demonstrating an intermediate level of concern for self and others denotes the compromising style, where assertiveness and cooperation are both present, but in a diluted form. Both parties give up something to arrive at a mutually acceptable outcome (Kleinman and Palmon 2000; Rahim and Magner 1995).

5. Avoiding

The avoiding style is unlikely to resolve the conflict in an audit negotiation. Its elements are that of having a low concern for self and a low concern for others (Rahim and Magner 1995). In this style, the player is both unassertive and uncooperative and exhibits the attitude of being unwilling to deal with the issue at hand (Kleinman and Palmon 2000). Perhaps this style is practiced by those who believe that the issue will just blow over and disappear if left alone.

From a research perspective, like many others we greatly benefited from previous work by Blake and Mouton (1964) with their Dual-Concerns model. Their model focused on two concerns, on 'self and 'other' as our model will examine the two dimensions of assertiveness and cooperation as shown in Figure 5.

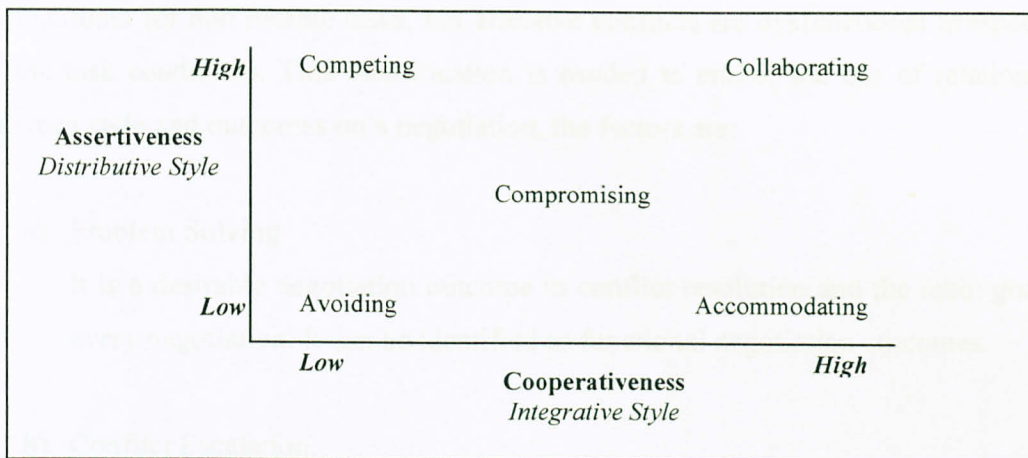


Figure 5 Relationships between Assertiveness and Cooperativeness

4.3 VARIABLE OF NEGOTIATION OUTCOMES

The seven factors of negotiation outcomes based on explorative research by Cheung, et al (2006) using factors analysis. These factors further identified as either functional or dysfunctional negotiation outcomes (Rahim, 2001). Substantive or task-related conflict is functional for non routine tasks, but affective conflicts are dysfunctional irrespective of the task conditions. This identification is needed to enable the use of relationship between style and outcomes on a negotiation, the factors are:

a) Problem Solving

It is a desirable negotiation outcome in conflict resolution and the main goal of every negotiation. It can be identified as functional negotiation outcomes.

b) Conflict Escalation.

The outcome is characterized by a higher level of conflict. This factor is describe as a dysfunctional outcome such an outcome having a negative connotation as the dispute is unlikely to be resolved with an escalating conflict.

c) Relationship deterioration

This factor related to the deterioration of relationship between disputants. Relationship between the negotiators could be a critical factor in tackling the conflict. Thus, with a deteriorating relationship the chance of future cooperation becomes distant. This factor therefore is a dysfunctional outcome due to its negative impact on the conflict.

d) Inaction

This is characterized by withdrawal from and postponement of the negotiation process. Inaction is often undesirable as the chance of getting the dispute resolved becomes remote. This factor is dysfunctional outcomes.

e) Further disagreement

The outcome is the least a negotiator wants and clearly dysfunctional negotiation outcomes. It includes the outcomes of further disagreement after the negotiation and the dispute reaches a stalemate.

f) Relationship maintained

This functional outcome is described as relationship maintained and includes more positive negotiation outcomes such as some of the needs of the parties are satisfied and further interaction is kept.

g) Conflict reduction

It is interpreted as conflict reduction as this is a lesser chance for future disputes and a functional outcome favored by the disputants.

In another research using same method by Yiu, et al (2008), adopted from Yiu (2005), four negotiation outcomes are determined: deterioration, substantial improvement, maintaining parties' relationship, and position clarification. Both of research identified the factors of outcomes in the taxonomies of functional and dysfunctional

CHAPTER 5

RESULT AND DISCUSSION

5.1 STATISTIC OF RESPONDENTS

A month after sending the questionnaire to the random construction industry, there are 39 respondents give the feedbacks. This is included four “face to face interview” with selected company. As shown in the Figure 6, the respondents consist of 51% consultant, 33% contractor, 13% of government sector and another 3% from developer company.

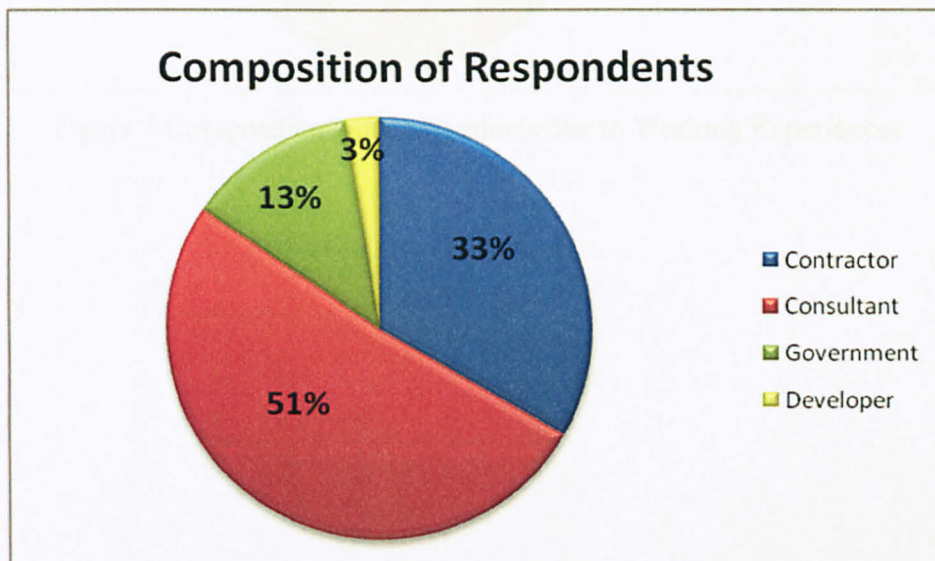


Figure 6 Compositions of Respondent

For further details, refer to Figure 7 that shows the respondent percentage experiences in the construction industry. Most 62% of the respondents have more than 10 year experiences in the industry

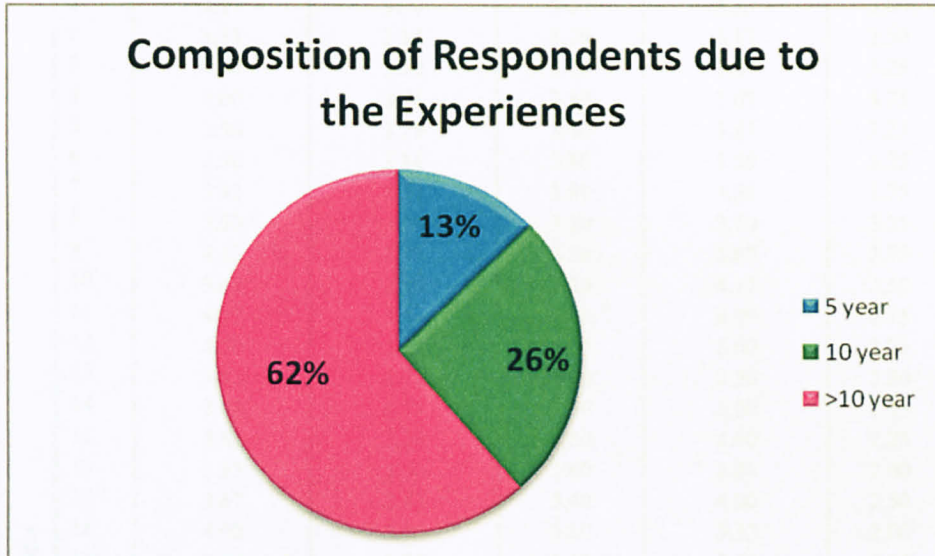


Figure 7 Compositions of Respondents due to Working Experiences



5.2 NEGOTIATION STYLES

Table 3 Average Score for Negotiation Styles

		Negotiation Styles				
		Collaborating	Accommodating	Competing	Compromising	Avoiding
Private Developer	1	4.17	3.00	3.00	3.33	3.00
	2	3.33	3.14	3.20	3.17	2.50
	3	4.00	3.14	3.40	3.67	3.25
	4	4.00	3.71	3.80	3.67	4.25
	5	3.50	3.29	3.40	3.67	3.25
	6	3.50	3.14	3.80	3.50	3.25
	7	3.83	2.71	3.80	3.33	1.75
	8	3.50	3.29	3.20	3.50	3.25
	9	4.33	2.57	3.80	3.67	2.75
	10	3.67	2.86	3.20	4.17	2.50
	11	4.17	3.14	3.00	4.00	2.75
	12	4.50	2.71	3.20	5.00	2.75
	13	3.83	2.71	3.80	3.50	3.50
	14	3.83	2.71	2.80	3.00	1.75
	15	3.67	3.29	2.80	4.00	2.25
	16	3.33	3.00	3.60	2.83	2.00
	17	3.67	2.43	3.40	4.00	2.50
	18	4.00	3.00	3.60	3.33	2.00
	19	3.50	3.57	3.60	3.50	3.25
	20	3.50	3.43	3.80	4.00	2.25
	21	5.00	4.57	4.40	5.00	5.00
	22	4.50	3.14	3.80	3.50	5.00
	23	3.50	2.86	3.20	3.00	2.75
	24	4.00	3.00	3.60	3.17	2.75
	25	4.17	2.71	2.20	3.67	2.00
	26	3.67	1.57	3.00	2.83	2.50
	27	4.00	3.00	3.40	3.50	3.00
	28	4.67	4.00	4.80	4.83	3.25
	29	4.67	3.29	3.20	4.00	2.50
	30	4.17	2.57	4.80	2.67	1.00
	31	4.17	3.86	2.40	3.83	3.50
	32	3.50	3.14	3.40	3.33	2.25
	33	4.33	3.57	2.60	4.17	3.00
	34	4.00	2.86	2.80	3.67	2.50
	35	4.17	3.29	3.40	4.00	3.00
	36	3.17	2.57	2.60	2.83	2.25
	37	4.33	3.71	3.40	3.83	2.50
	38	3.67	2.00	2.40	3.17	2.00
	39	4.33	4.29	3.80	3.83	3.00
		Collaborating	Accommodating	Competing	Compromising	Avoiding
Mean		3.94	3.10	3.37	3.63	2.78
SD		0.424631477	0.567802259	0.5813568	0.549028231	0.79509
% Mean		23.44	18.42	20.02	21.59	16.53

By calculating the average scores respective to the five factors, the average scores for the five negotiating styles were obtained. Table 4 shows the summary. The differences between these score are very significant; the style that display higher average score may be viewed as the most dominant style had been used as compared to the others. In this research, collaborating is the most dominant style for negotiation in Malaysia construction industry.

Table 4 Summary for Negotiation Styles

Style	Average Score	Standard Deviation	% Average Score
Collaborating	3.94	0.424631477	23.44
Accommodating	3.10	0.567802259	18.42
Competing	3.37	0.5813568	20.02
Compromising	3.63	0.549028231	21.59
Avoiding	2.78	0.79509	16.53



Figure 8 Average Score of Negotiation Styles



5.3 NEGOTIATION OUTCOMES

Table 5 Average Score for Negotiation Outcomes

		Negotiation Outcome						
Private Developer		Problem Solving	Relationship Maintained	Conflict Reduction	Conflict Escalation	Relationship Deterioration	Inaction	Further Disagreement
	1	3.40	4.00	3.00	2.25	2.25	2.00	2.50
	2	3.40	4.00	2.50	3.00	2.25	2.50	3.00
	3	3.80	3.50	3.00	2.25	2.75	4.00	3.00
	4	3.60	4.00	3.50	4.00	3.75	4.00	3.00
	5	3.60	3.00	2.50	2.50	2.75	3.00	3.00
	6	3.40	4.50	4.00	3.50	3.00	3.50	3.50
	7	4.00	3.00	3.00	2.00	1.25	2.00	1.50
	8	3.60	3.50	3.50	3.25	2.25	3.50	3.00
	9	4.20	4.50	3.50	2.25	2.75	3.50	2.50
	10	3.20	3.00	3.00	3.00	3.00	3.00	3.00
	11	3.60	4.50	3.50	2.75	2.25	3.00	3.00
	12	4.20	4.50	3.50	2.00	1.00	4.00	3.00
	13	3.00	3.00	3.00	2.00	2.25	1.00	2.50
	14	3.40	4.00	3.50	2.75	2.25	2.50	2.00
	15	3.60	4.50	2.00	2.00	2.00	3.50	2.50
	16	3.40	4.50	2.50	2.50	2.25	3.00	2.50
	17	3.20	4.50	2.50	2.25	1.75	3.50	2.00
	18	3.20	4.00	2.50	2.75	2.25	3.50	2.00
	19	3.40	3.50	4.00	3.50	3.25	3.50	4.00
	20	4.00	3.50	3.00	3.00	2.25	3.50	3.00
	21	4.60	4.50	3.00	2.00	2.00	3.00	3.00
	22	4.20	4.50	3.50	2.25	2.00	3.50	3.00
	23	2.60	3.00	2.00	3.00	1.75	3.00	3.00
	24	3.40	3.00	3.00	2.75	3.00	2.50	2.00
	25	3.80	4.00	2.50	2.50	1.00	2.00	2.00
	26	3.40	4.00	2.50	2.00	1.50	2.50	1.00
	27	4.00	4.00	2.00	2.75	2.25	2.50	1.50
	28	3.40	2.50	2.00	2.25	2.00	3.00	3.00
	29	4.00	4.00	3.00	2.75	2.25	2.50	2.00
	30	3.40	4.00	3.00	1.75	3.00	2.00	1.50
	31	4.00	3.50	2.50	2.00	2.00	2.00	2.50
	32	3.80	3.50	3.00	2.75	2.50	2.50	3.00
	33	4.40	4.50	2.50	2.75	2.75	2.50	3.00
	34	3.40	4.50	3.00	3.00	2.25	2.50	2.50
	35	4.20	3.50	2.50	2.50	2.25	3.50	3.00
	36	3.20	3.50	3.00	1.75	2.00	2.50	1.50
	37	4.20	4.50	3.50	3.50	2.25	3.00	3.00
	38	3.20	3.00	3.00	3.25	2.75	3.00	2.00
	39	4.00	3.50	3.00	3.00	2.75	2.50	3.00
		Problem Solving	Relationship Maintained	Conflict Reduction	Conflict Escalation	Relationship Deterioration	Inaction	Further Disagreement
μ		3.65	3.82	2.92	2.62	2.30	2.88	2.56
SD		0.42973	0.59035203	0.519849	0.540608	0.57405382	0.6635	0.640512615

By calculating the average scores respective to the five factors, the average scores for the five negotiating styles were obtained. Table 6 shows the summary.

Table 6 Summary for Negotiation Outcomes

Negotiation Outcomes	Average Score	Standard deviation
Problem Solving	3.65	0.42973
Relationship Maintained	3.84	0.59035203
Conflict Reduction	2.90	0.519849
Conflict Escalation	2.59	0.540608
Relationship Deterioration	2.29	0.57405382
Inaction	2.90	0.6635
Further Disagreement	2.59	0.640512615

5.4 RELATIONSHIP BETWEEN NEGOTIATION STYLES AND OUTCOMES

For further details regarding on the relationship between the negotiation styles and outcomes, the data must be analyze using the multiple regression analysis. Thus, Table 7, represent the coefficient for the negotiation outcomes that influenced by the different negotiation styles.

Table 7 Relationship between Negotiation Styles and Outcomes

	<i>Problem Solving</i>	<i>Relationship Maintained</i>	<i>Conflict Reduction</i>	<i>Conflict Escalation</i>	<i>Relationship Deterioration</i>	<i>Inaction</i>	<i>Further Disagreement</i>
Intercept	1.1555	2.9026	2.6366	3.6148	2.4695	2.4453	1.5563
Collaborating (x1)	0.4853	0.4667	0.0314	-0.4243	-0.2482	-0.6651	-0.7543
Accommodating (x2)	0.1869	-0.0854	-0.0753	0.4315	0.3945	-0.1760	0.5189
Competing (x3)	-0.1062	-0.1903	0.0927	-0.1176	0.2109	0.2009	0.0457
Compromising (x4)	0.0996	-0.0263	-0.1010	-0.0996	-0.3858	0.6636	0.4402
Avoiding (x5)	-0.0006	0.0282	0.1619	0.0341	0.1003	0.1871	0.2236

There are seven multiple regression equation obtained from the data:

1. Problem solving

$$y = 1.155493 + 0.485342 x_1 + 0.186912 x_2 - 0.106166 x_3 + 0.099553 x_4 - 0.000637 x_5$$

In this equation there is one style that gives negative influence to the problem solving outcome, which is competing. Problem solving will not reached if no one in negotiation has collaborative, accommodative, compromising and avoiding style. Even though avoiding style has not strength enough relationship to problem solving, the value is positive.

2. Relationship Maintained

$$y = 2.902606 + 0.466680 x_1 - 0.085419 x_2 - 0.190316 x_3 - 0.026255 x_4 + 0.028182 x_5$$

Three styles give negative strength relationship to this outcome, which are accommodating, competing and compromising. If the value of x_1 and x_5 is 0 or no one in negotiation has any collaborating or avoiding style, the relationship never maintains.

3. Conflict Reduction

$$y = 2.636634 + 0.031362 x_1 - 0.075254 x_2 + 0.092737 x_3 - 0.101026 x_4 + 0.161918 x_5$$

This equation reveals that conflict reduction is affected with the negative value of collaborating, accommodating and compromising. If these styles are applied, it may cause the conflict to all parties.

4. Conflict Escalation

$$y = 3.614848 - 0.424314 x_1 + 0.431477 x_2 - 0.117583 x_3 - 0.099582 x_4 + 0.034150 x_5$$

From this equation, collaborating, competing and compromising style will reduce the conflict. Nevertheless, conflict escalation will come up on the negotiation process on any condition of style.

5. Relationship Deterioration

$$y = 2.469480 - 0.248211 x_1 + 0.394485 x_2 + 0.210916 x_3 - 0.385768 x_4 + 0.100306 x_5$$

Relationship deterioration will occur in any condition of negotiation style, three styles will increase this outcome that are accommodating, competing and avoiding.

6. Inaction

$$y = 2.445343 - 0.665118 x_1 - 0.175957 x_2 + 0.200885 x_3 + 0.663641 x_4 + 0.187121 x_5$$

Inaction outcome will be reduced by collaborating and accommodating style. Like two outcomes before that are conflict escalation and relationship deterioration, Inaction outcome cannot be evade in a negotiation process.

7. Further Disagreement

$$y = 1.556291 - 0.754269 x_1 + 0.518876 x_2 + 0.045689 x_3 + 0.440215 x_4 + 0.223587 x_5$$

This outcome similar with Inaction, collaborating will reduce the disagreement, but the other styles may contribute to further disagreement.

5.5 CASE STUDY

There is the situation that can achieve higher potential of problem solving during negotiation shown below.

Problem Solving

$$= 1.155493 + 0.485342 \text{ Collaborating (x1)} + 0.186912 \text{ Accommodating (x2)} - 0.106166 \text{ Competing (x3)} + 0.099553 \text{ Compromising (x4)} - 0.000637 \text{ Avoiding (x5)}$$

Table 8 Relationship between Problem Solving (Outcome) and Styles

People	x1	x2	x3	x4	x5
1	1.820497	1.820497	1.820497	1.820497	1.820497
2	2.305839	2.007409	1.714331	1.92005	1.81986
3	2.791181	2.194321	1.608165	2.019603	1.819223
4	3.276523	2.381233	1.501999	2.119156	1.818586
5	3.761865	2.568145	1.395833	2.218709	1.817949

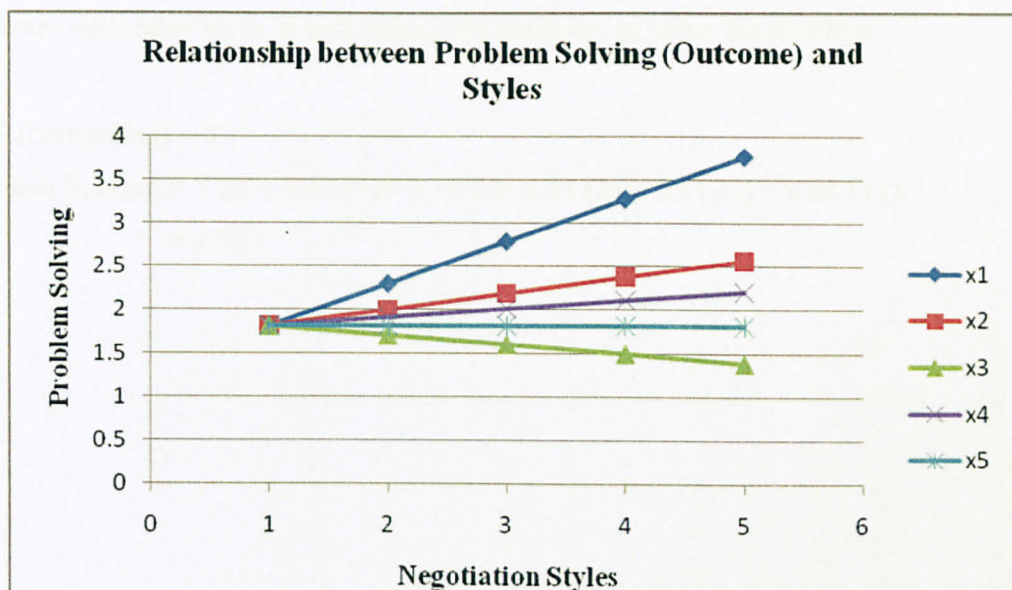


Figure 9 Relationships between Problem Solving (Outcome) and Styles

Figure 9 shows the relationships between the negotiation outcomes, problem solving, with the negotiation styles. The higher value of problem solving represents the example of the decent situation to solve the problem. From the figure 10, the higher potential to solve the problem during negotiation is when more collaborating people involve in negotiation.

For example, in **problem solving** scenario;

If x_1 (collaborating) = 1

$$\begin{aligned}\text{Problem Solving} &= 1.29 + 0.47 (1) + 0.14 (1) - 0.11 (1) + 0.11 (1) + 0.013 (1) \\ &= 1.893\end{aligned}$$

If x_1 (collaborating) = 2

$$\begin{aligned}\text{Problem Solving} &= 1.29 + 0.47 (2) + 0.14 (1) - 0.11 (1) + 0.11 (1) + 0.013 (1) \\ &= 2.383\end{aligned}$$

Contrary with other style, it will reduce the tendency to solve the problem.

If x_3 (competing) = 2

$$\begin{aligned}\text{Problem Solving} &= 1.29 + 0.47 (1) + 0.14 (1) - 0.11 (2) + 0.11 (1) + 0.013 (1) \\ &= 1.783\end{aligned}$$

CHAPTER 6

CONCLUSION

This report emphasized about the survey research that had been sent to the professional in construction industry in Peninsular Malaysia. 39 feedbacks out of 148 respondents are analyzed in order to determine the most dominant style that is used during the negotiation in industry. However, this research is mainly focused on general aspect, not stated in specific condition of negotiation. The style might be applicable at any situation during the conflict. In fact, future research can be continue for further detail of style practiced in specific condition.

Moreover, from the data collection, there are five different negotiation styles (Rahim, 1983) that influenced the negotiation outcomes that had been analyzed using multiple regression analysis. Subsequence with the research and survey, the **collaborating** style is defined as the most dominant style for negotiation in Malaysia construction industry. Besides, this research also identified that the negotiation outcomes are influenced by different styles of negotiation. Thus, the most dominant negotiation style could be taken as the benchmark for construction professionals in Malaysia in the future. By understanding the negotiation styles in Malaysia, it will help them to solve conflict and improve the negotiation.

CHAPTER 7

RECOMMENDATION

For future development in construction industry, there are a few suggestions to improve the negotiation that might help professional to solve the conflict.

1. Research on special context of negotiation

Focus the negotiation styles in diverse condition of negotiation such as:

- i. Technical negotiation
- ii. Strategic negotiation
- iii. Commercial negotiation
- iv. Cost negotiation.

Each negotiation might need specific styles to achieve the mutual agreement between both parties. Instead, each party will get the maximum benefit from the style that they used. For example, technical negotiation may need compromising style compared to competing style that might be applicable for commercial negotiation.

2. Research on different styles of negotiation in each composition of respondents.

Each composition of respondents used different styles of negotiation while facing the conflict. For example, the government may be applied accommodating instead of competing applied by private sector caused by high competition in industry monopoly by private sector.



3. Research on different gender in construction industry. Practically, male and female have different opinion and skill in negotiation. For example, male might be high tendency to use competing while female intend to practice collaborating style during the negotiation.
4. Focus the research on the specific professional such as style characteristic used by architect or engineer while facing the conflict. Different field background might be used different style of negotiation.

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APPENDICES

Questionnaire Sample

Appendix 1

Questionnaire Sample

A Study of Negotiation Style in Malaysia Construction Industry

A study of negotiation style in Malaysian construction industry involves the participation of the professionals from construction industry in Peninsular Malaysia. The nature of construction industry contributes to the conflict condition especially in project management. Different technical background from different organization produces different point of view during the conflict. In fact, negotiation is the most efficient way to resolve the conflict. A multiple of negotiation styles established from different professional background exist within the scope of engineering project management. Understanding the other negotiator's style will develop a high skill of negotiation. This study is proposed to identify different style of negotiation in construction industry in Malaysia and determine the most dominant style among the professionals.

The questionnaire is divided into 3 sections; Section A, B and C. Please answer the questionnaire by referring to the instructions given in each section.

Section A: General / Background Information

Please fill in the blanks and tick in () provided.

I. Company

- i. Name of company (optional).....
- ii. Type of company
☐ Contractor
☐ Consultant
☐ Developer
☐ Others (please specify).....
- iii. Class (if applicable, for contractor)
a) PKK
☐ A ☐ B ☐ C ☐ D
b) CIDB
☐ G1 ☐ G2 ☐ G3 ☐ G4 ☐ G5 ☐ G6 ☐ G7
- iv. Company's experience in building construction?
☐ <10 years ☐ 10-20 years ☐ 20-30 years ☐ >30 years


II. Respondent

- i. What is your designation?
☐ Senior Project Manager
☐ Project Manager
☐ Engineer
☐ Quantity Surveyor
☐ Architect
☐ Others (please specify).....
- ii. How many years do you involved in construction industry?
☐ <3 years ☐ 3-5 years ☐ 5-10 years ☐ >10 years
- iii. How many projects have you completed until May 2009?
☐ <5 ☐ 5-10 ☐ 10-20 ☐ 20-30 ☐ >30

Section B: Negotiation Behavior & Outcome

Please indicate your selected answer by circling a number according to the scale of agreement.

- I. Consider your recent experience in negotiation involving various parties to settle construction conflict, evaluate the following negotiation style indicator based on your level of agreement.

		Strongly disagree			Strongly agree		
							
QI.1	I use my influence to get my ideas accepted	1	2	3	4	5	
QI.2	I generally try to satisfy the needs of the other	1	2	3	4	5	
QI.3	I attempt to avoid being “put on the spot” and try to keep my conflict with the other to myself	1	2	3	4	5	
QI.4	I try to integrate my ideas with the other to come up with a decision jointly	1	2	3	4	5	
QI.5	I try to work with the other to find solutions to a problem which satisfy our expectation	1	2	3	4	5	
QI.6	I usually avoid open discussion of my differences with the other	1	2	3	4	5	
QI.7	I try to find a middle course to resolve an impasse	1	2	3	4	5	
QI.8	I try to investigate an issue with the other to find a solution that will be acceptable to everyone involved	1	2	3	4	5	
QI.9	I use my authority to make a decision in my favor	1	2	3	4	5	
QI.10	I usually try to accommodate the wishes of the other	1	2	3	4	5	
QI.11	I give in to the wishes of the other	1	2	3	4	5	
QI.12	I exchange accurate information with the other so that we can solve the problem together	1	2	3	4	5	
QI.13	I usually allow concessions to the other	1	2	3	4	5	
QI.14	I usually propose a middle ground to break deadlocks	1	2	3	4	5	
QI.15	I negotiate with the other so that a compromise can be reached	1	2	3	4	5	
QI.16	I try to stay away from disagreement with the other	1	2	3	4	5	
QI.17	I avoid an encounter with the other	1	2	3	4	5	
QI.18	I use my expertise to make a decision in my favor	1	2	3	4	5	
QI.19	I often go along with the suggestion of the other	1	2	3	4	5	
QI.20	I use ‘give and take’ so that a compromise can be reached	1	2	3	4	5	
QI.21	I am generally firm in pursuing my side of the issue	1	2	3	4	5	
QI.22	I try to bring all concerns out in the open so that the issues can be resolved in the best possible way	1	2	3	4	5	
QI.23	I collaborate with the other to come up with decisions acceptable to us	1	2	3	4	5	
QI.24	I try to satisfy the expectations of the other	1	2	3	4	5	
QI.25	I sometimes use my power to win a competitive situation	1	2	3	4	5	
QI.26	I try to keep my disagreements with the other to myself to avoid hard feelings	1	2	3	4	5	
QI.27	I try to avoid unpleasant exchanges with the other	1	2	3	4	5	
QI.28	I try to work with the other for a proper understanding of a problem	1	2	3	4	5	

- II. With reference to the same negotiation experienced in (I) above, please evaluate your level of agreement for each of the following negotiation outcome indicator.

		Strongly disagree			Strongly agree		
		←-----→					
QII.1	The solution found satisfied the goals and needs of both parties	1	2	3	4	5	
QII.2	Optimal and creative solution to problem was found	1	2	3	4	5	
QII.3	There were further disagreements or escalations in conflict	1	2	3	4	5	
QII.4	Stalemate was aroused	1	2	3	4	5	
QII.5	The issue was postponed until a better time	1	2	3	4	5	
QII.6	I withdrew from a threatening situation	1	2	3	4	5	
QII.7	There was lack of basic information needed to construct solutions to the conflicts	1	2	3	4	5	
QII.8	The dispute was difficult to resolve	1	2	3	4	5	
QII.9	Some of each party's needs were satisfied, but not all of them	1	2	3	4	5	
QII.10	Relationship between the parties was kept intact for future interactions	1	2	3	4	5	
QII.11	Less conflict-laden environment was produced	1	2	3	4	5	
QII.12	More behavioral compliance with both parties was achieved	1	2	3	4	5	
QII.13	I ignored the needs and expectations of the other party	1	2	3	4	5	
QII.14	Solution development was likely to be sub-optimal, resulting in wasted resources	1	2	3	4	5	
QII.15	Task conflict was turned into relationship conflict	1	2	3	4	5	
QII.16	The levels of conflict were reduced	1	2	3	4	5	
QII.17	The agreement was difficult to reach	1	2	3	4	5	
QII.18	A higher level of ongoing conflict was experienced	1	2	3	4	5	
QII.19	More task conflict was experienced	1	2	3	4	5	
QII.20	Less future disputes were likely made	1	2	3	4	5	
QII.21	The negotiation process was a one-side decision-making process	1	2	3	4	5	

Section C: Other Information

- I. Kindly state your project details that you refer during the survey above.

.....

- II. Do you have any further information regarding on the negotiation style in construction industry in Malaysia nowadays? If yes, briefly explain.

.....

.....

Thank you for your precious time and cooperation in completing the questionnaire. All responses will be used for research purpose only. For further information, please contact Azzuin 017 5041 834 or email azzuin_amer@yahoo.com

Appendix 2

Result Analysis

NEGOTIATION STYLES

Question	Collaborating						μ	Accomodating						μ	Competing						μ	Compromising						μ	Avoiding				μ
	23	22	12	5	1	28		24	10	2	11	19	13		3	9	8	25	21	18		7	14	15	4	20	27		16	17	26	6	
1	4	4	5	5	3	4	4.17	3	4	4	2	2	3	3	3.00	2	4	3	4	2	3.00	2	3	3	5	3	4	3.33	3	3	3	3	3
2	3	3	3	5	2	4	3.33	3	3	3	2	4	3	4	3.14	2	5	2	3	4	3.20	3	3	3	4	4	2	3.17	2	2	2	4	2.50
3	4	4	4	4	4	4	4.00	4	2	5	2	4	3	2	3.14	2	5	4	3	3	3.40	3	4	4	4	3	4	3.67	4	3	4	2	3.25
4	4	4	4	4	4	4	4.00	4	3	4	3	4	4	4	3.71	3	4	4	4	4	3.80	3	3	4	4	4	4	3.67	5	5	4	3	4.25
5	3	4	4	4	3	3	3.50	3	3	3	3	4	3	4	3.29	3	4	3	4	3	3.40	4	3	4	4	4	3	3.67	3	3	3	4	3.25
6	4	4	4	4	2	3	3.50	4	3	3	3	3	3	3	3.14	3	4	4	4	4	3.80	4	3	3	4	4	3	3.50	3	4	3	3	3.25
7	4	5	3	4	4	3	3.83	3	3	4	1	3	3	2	2.71	2	3	5	5	4	3.80	3	3	4	4	3	3	3.33	1	1	1	4	1.75
8	4	3	4	4	3	3	3.50	4	3	4	2	3	4	3	3.29	3	4	2	4	3	3.20	3	3	4	4	4	3	3.50	3	3	3	4	3.25
9	4	4	4	5	4	5	4.33	2	3	3	2	2	3	3	2.57	4	3	4	4	4	3.80	4	4	4	4	3	3	3.67	3	2	3	3	2.75
10	4	5	2	5	1	5	3.67	4	4	4	1	1	3	3	2.86	2	5	3	3	3	3.20	4	4	5	4	3	5	4.17	2	4	2	2	2.50
11	4	4	4	5	4	4	4.17	4	3	4	2	2	4	3	3.14	2	4	3	3	3	3.00	4	4	4	5	3	4	4.00	4	3	2	2	2.75
12	5	5	5	5	2	5	4.50	3	1	4	1	2	4	4	2.71	1	5	2	4	4	3.20	5	5	5	5	5	5	5.00	4	1	2	4	2.75
13	3	5	3	5	4	3	3.83	3	2	3	2	3	3	3	2.71	2	4	3	5	5	3.80	3	3	5	3	4	3	3.50	5	5	3	1	3.50
14	4	4	4	5	3	3	3.83	3	2	4	1	2	5	2	2.71	2	4	2	4	2	2.80	2	4	4	4	2	2	3.00	2	2	2	1	1.75
15	3	5	4	4	2	4	3.67	4	4	4	2	2	4	3	3.29	2	5	2	3	2	2.80	5	4	4	4	4	3	4.00	2	2	3	2	2.25
16	4	3	3	3	3	4	3.33	3	2	4	2	3	2	5	3.00	2	5	3	4	4	3.60	2	2	4	4	3	2	2.83	2	2	2	2	2.00
17	2	4	4	4	3	5	3.67	2	2	2	2	4	3	2	2.43	3	3	4	3	4	3.40	4	4	4	4	4	4	4.00	2	4	2	2	2.50
18	4	5	3	4	3	5	4.00	3	3	3	3	4	3	2	3.00	3	5	3	4	3	3.60	2	3	4	5	3	3	3.33	2	2	2	2	2.00
19	4	3	3	3	4	4	3.50	4	4	4	3	3	4	3	3.57	4	4	4	3	3	3.60	3	4	4	4	3	3	3.50	4	3	3	3	3.25
20	3	3	3	3	4	5	3.50	3	3	4	3	4	4	3	3.43	2	5	5	4	3	3.80	5	4	3	5	4	3	4.00	2	3	2	2	2.25
21	5	5	5	5	5	5	5.00	5	3	5	4	5	5	5	4.57	3	5	4	5	5	4.40	5	5	5	5	5	5	5.00	5	5	5	5	5.00

22	4	5	4	5	4	5	4.50	4	5	5	1	2	1	4	3.14	2	5	2	5	5	3.80	4	2	4	5	2	4	3.50	5	5	5	5	5.00
23	4	5	3	3	2	4	3.50	3	3	3	3	3	2	3	2.86	2	5	3	3	3	3.20	3	3	3	3	3	3	3.00	2	2	3	4	2.75
24	3	4	5	4	4	4	4.00	3	3	3	2	3	3	4	3.00	3	4	3	4	4	3.60	4	3	3	4	2	3	3.17	2	2	4	3	2.75
25	3	5	5	5	3	4	4.17	3	3	4	2	1	3	3	2.71	1	3	1	4	2	2.20	3	5	3	5	4	2	3.67	2	2	2	2	2.00
26	2	4	5	3	4	4	3.67	1	2	1	1	2	2	2	1.57	1	4	2	4	4	3.00	2	2	4	5	2	2	2.83	3	4	2	1	2.50
27	4	3	4	5	4	4	4.00	3	3	4	2	2	4	3	3.00	2	3	4	3	5	3.40	3	3	4	5	3	3	3.50	3	5	2	2	3.00
28	5	5	5	5	3	5	4.67	5	4	4	3	3	4	5	4.00	5	4	5	5	5	4.80	4	5	5	5	5	5	4.83	3	3	5	2	3.25
29	5	5	5	5	4	4	4.67	4	3	3	3	2	4	4	3.29	2	4	2	4	4	3.20	3	3	5	5	5	3	4.00	3	2	3	2	2.50
30	3	4	5	4	5	4	4.17	3	3	5	1	3	1	2	2.57	5	4	5	5	5	4.80	1	2	4	3	3	3	2.67	1	1	1	1	1.00
31	4	4	5	5	3	4	4.17	4	4	4	3	4	4	4	3.86	1	4	2	4	1	2.40	3	3	4	5	5	3	3.83	4	4	3	3	3.50
32	5	3	4	5	1	3	3.50	3	3	3	3	5	2	3	3.14	3	4	3	3	4	3.40	3	2	4	4	3	4	3.33	2	2	3	2	2.25
33	5	4	5	5	2	5	4.33	3	3	4	3	5	4	3	3.57	2	2	3	3	3	2.60	4	3	5	5	4	4	4.17	3	2	3	4	3.00
34	3	5	3	5	3	5	4.00	3	2	5	2	3	2	3	2.86	2	5	2	2	3	2.80	4	3	3	5	4	3	3.67	2	2	3	3	2.50
35	4	5	5	4	2	5	4.17	2	2	4	3	5	3	4	3.29	3	5	1	4	4	3.40	3	4	5	5	3	4	4.00	2	4	3	3	3.00
36	1	4	4	4	3	3	3.17	3	2	2	3	3	2	3	2.57	1	4	2	4	2	2.60	3	2	3	4	3	2	2.83	3	2	2	2	2.25
37	4	5	4	5	4	4	4.33	3	4	4	3	4	4	4	3.71	2	4	3	4	4	3.40	4	4	4	4	4	3	3.83	4	4	1	1	2.50
38	5	4	3	4	2	4	3.67	3	2	2	1	2	2	2	2.00	2	4	1	3	2	2.40	3	3	4	3	4	2	3.17	2	1	2	3	2.00
39	5	5	4	5	3	4	4.33	4	4	5	4	4	4	5	4.29	4	4	4	4	3	3.80	3	4	4	5	4	3	3.83	3	3	3	3	3.00
μ	4	4	4	4	3	4		3	3	4	2	3	3	3		2	4	3	4	3		3	3	4	4	4	3		3	3	3	3	

NEGOTIATION OUTCOMES

	Problem Solving					μ	Relationship Maintained			Conflict Reduction		μ	Conflict Escalation				μ	Relationship Deterioration				μ	Inaction		μ	Further Disagreement		μ
	11	12	1	2	16		9	10		20	17		19	18	7	8		15	13	21	14		6	5		3	4	
1	3	2	4	4	4	3.4	4	4	4	4	2	3	2	2	3	2	2.3	3	2	2	2	2.3	2	2	2	2	3	2.5
2	4	2	4	4	3	3.4	3	5	4	3	2	2.5	3	4	3	2	3	3	2	2	2	2.3	2	3	2.5	4	2	3
3	4	3	4	4	4	3.8	4	3	3.5	4	2	3	2	2	2	3	2.3	2	3	3	3	2.8	4	4	4	3	3	3
4	4	4	4	3	3	3.6	4	4	4	3	4	3.5	4	4	4	4	4	4	3	4	4	3.8	4	4	4	3	3	3
5	4	3	4	4	3	3.6	3	3	3	3	2	2.5	2	2	3	3	2.5	3	3	2	3	2.8	3	3	3	3	3	3
6	3	3	3	4	4	3.4	4	5	4.5	4	4	4	4	4	3	3	3.5	3	3	3	3	3	3	4	3.5	4	3	3.5
7	3	3	5	5	4	4	3	3	3	4	2	3	2	2	1	3	2	2	1	1	1	1.3	1	3	2	2	1	1.5
8	3	3	4	4	4	3.6	4	3	3.5	4	3	3.5	2	4	4	3	3.3	2	2	2	3	2.3	3	4	3.5	3	3	3
9	5	2	5	5	4	4.2	4	5	4.5	4	3	3.5	2	2	3	2	2.3	4	1	3	3	2.8	3	4	3.5	3	2	2.5
10	3	3	3	4	3	3.2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
11	3	3	4	4	4	3.6	4	5	4.5	4	3	3.5	2	3	3	3	2.8	3	2	2	2	2.3	3	3	3	4	2	3
12	5	2	4	5	5	4.2	4	5	4.5	5	2	3.5	2	2	2	2	2	1	1	1	1	1	4	4	4	4	2	3
13	3	1	4	4	3	3	3	3	3	3	3	3	3	3	1	1	2	3	1	2	3	2.3	1	1	1	3	2	2.5
14	4	2	4	4	3	3.4	4	4	4	3	4	3.5	4	2	3	2	2.8	2	3	2	2	2.3	3	2	2.5	2	2	2
15	5	2	5	4	2	3.6	4	5	4.5	2	2	2	2	2	2	2	2	2	2	2	2	2	5	2	3.5	3	2	2.5
16	3	2	4	5	3	3.4	4	5	4.5	3	2	2.5	3	3	2	2	2.5	2	2	2	3	2.3	3	3	3	2	3	2.5
17	4	2	3	4	3	3.2	5	4	4.5	3	2	2.5	3	2	2	2	2.3	2	2	2	1	1.8	4	3	3.5	2	2	2
18	4	2	4	3	3	3.2	3	5	4	3	2	2.5	3	3	3	2	2.8	2	2	2	3	2.3	4	3	3.5	2	2	2
19	3	4	2	4	4	3.4	4	3	3.5	4	4	4	3	4	3	4	3.5	4	3	3	3	3.3	3	4	3.5	4	4	4
20	5	2	4	5	4	4	4	3	3.5	4	2	3	3	4	3	2	3	3	3	1	2	2.3	3	4	3.5	3	3	3
21	5	3	5	5	5	4.6	4	5	4.5	5	1	3	1	1	3	3	2	1	3	3	1	2	3	3	3	3	3	3
22	5	3	4	4	5	4.2	4	5	4.5	5	2	3.5	1	1	4	3	2.3	4	1	1	2	2	5	2	3.5	2	4	3
23	3	2	3	3	2	2.6	2	4	3	2	2	2	3	3	4	2	3	2	2	1	2	1.8	2	4	3	3	3	3

24	3	3	4	4	3	3.4	2	4	3	3	3	3	2	3	3	2.8	3	3	3	3	3	2	2.5	2	2	2		
25	4	3	5	4	3	3.8	4	4	4	3	2	2.5	2	2	3	3	2.5	1	1	1	1	1	2	2	2	2		
26	4	1	5	4	3	3.4	3	5	4	3	2	2.5	2	3	2	1	2	1	1	3	1	1.5	2	3	2.5	1	1	1
27	4	3	5	5	3	4	4	4	4	3	1	2	3	2	3	3	2.8	3	2	2	2	2.3	2	3	2.5	2	1	1.5
28	5	2	4	4	2	3.4	2	3	2.5	2	2	2	2	2	3	2	2.3	2	2	2	2	2	3	3	3	3	3	3
29	5	2	5	4	4	4	4	4	4	4	2	3	3	3	3	2	2.8	2	2	2	3	2.3	3	2	2.5	2	2	2
30	4	1	4	4	4	3.4	4	4	4	4	2	3	2	2	2	1	1.8	3	3	4	2	3	2	2	2	2	1	1.5
31	4	4	4	4	4	4	3	4	3.5	3	2	2.5	2	2	2	2	2	2	1	2	3	2	2	2	2	2	3	2.5
32	3	5	4	4	3	3.8	3	4	3.5	4	2	3	3	3	3	2	2.8	3	2	3	2	2.5	2	3	2.5	3	3	3
33	3	4	5	5	5	4.4	5	4	4.5	3	2	2.5	3	3	3	2	2.8	3	1	5	2	2.8	2	3	2.5	3	3	3
34	3	3	4	3	4	3.4	4	5	4.5	4	2	3	3	3	4	2	3	2	1	4	2	2.3	3	2	2.5	3	2	2.5
35	3	4	5	4	5	4.2	3	4	3.5	4	1	2.5	3	3	3	1	2.5	2	1	4	2	2.3	5	2	3.5	4	2	3
36	3	3	3	3	4	3.2	4	3	3.5	4	2	3	1	1	3	2	1.8	2	2	2	2	2	2	3	2.5	2	1	1.5
37	4	4	5	4	4	4.2	4	5	4.5	4	3	3.5	4	4	3	3	3.5	3	2	1	3	2.3	4	2	3	3	3	3
38	4	3	3	3	3	3.2	4	2	3	3	3	3	2	4	3	4	3.3	4	2	3	2	2.8	2	4	3	2	2	2
39	4	4	4	4	4	4	3	4	3.5	4	2	3	3	3	3	3	3	3	2	2	4	2.8	3	2	2.5	3	3	3
Mean	3.8	2.7	4.1	4.1	3.6		3.6	4		3.5	2.3		2.6	2.7	2.8	2.41		2.5	2	2.4	2.3		2.9	2.9		2.7	2.4	

Appendix 3

Summary Output

SUMMARY OUTPUT PROBLEM SOLVING

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.68464459
R Square	0.46873821
Adjusted R Square	0.388244
Standard Error	0.33611396
Observations	39

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	5	3.289340344	0.657868	5.823254	0.000582707
Residual	33	3.728095553	0.112973		
Total	38	7.017435897			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	1.1555	0.548476687	2.106733	0.042827	0.039609761	2.2713782	0.03960976	2.27137817
Collaborating	0.4853	0.168757821	2.875971	0.007005	0.142002274	0.828683	0.14200227	0.82868301
Accomodating	0.1869	0.130287677	1.434611	0.160808	-0.07816019	0.4519844	-0.0781602	0.45198435
Competing	-0.1062	0.101926748	-1.04159	0.305174	-0.31353707	0.101206	-0.3135371	0.10120598
Compromising	0.0996	0.140677267	0.707676	0.484115	-0.18665606	0.385764	-0.1866561	0.38576404
Avoiding	-0.0006	0.084187172	-0.00757	0.994007	-0.17191724	0.1706429	-0.1719172	0.17064294

SUMMARY OUTPUT RELATIONSHIP MAINTAINED

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.322908
R Square	0.10426957
Adjusted R Square	-0.0314472
Standard Error	0.59956263
Observations	39

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	5	1.380903467	0.276181	0.768288	0.57933862
Residual	33	11.86268628	0.359475		
Total	38	13.24358974			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	2.9026	0.978376872	2.966757	0.005562	0.91208409	4.8931295	0.91208409	4.8931295
Collaborating	0.4667	0.30103148	1.550272	0.130615	-0.14577236	1.0791339	-0.1457724	1.07913394
Accomodating	-0.0854	0.232408145	-0.36754	0.715565	-0.55825657	0.3874193	-0.5582566	0.38741928
Competing	-0.1903	0.181817706	-1.04674	0.302827	-0.56022652	0.1795953	-0.5602265	0.17959528
Compromising	-0.0263	0.250941174	-0.10463	0.917305	-0.53679902	0.4842883	-0.536799	0.48428829
Avoiding	0.0282	0.150173716	0.18766	0.852292	-0.27734907	0.3337124	-0.2773491	0.33371237

SUMMARY OUTPUT CONFLICT REDUCTION

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.242115
R Square	0.05861967
Adjusted R Square	-0.0840137
Standard Error	0.54124581
Observations	39

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	5	0.601978949	0.120396	0.410981	0.83767391
Residual	33	9.66725182	0.292947		
Total	38	10.26923077			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	2.6366	0.883214461	2.98527	0.005304	0.839720678	4.4335473	0.83972068	4.43354732
Collaborating	0.0314	0.271751473	0.115406	0.908823	-0.5215209	0.5842442	-0.5215209	0.58424416
Accomodating	-0.0753	0.209802828	-0.35869	0.722113	-0.50210091	0.3515932	-0.5021009	0.35159321
Competing	0.0927	0.164133098	0.565011	0.575888	-0.24119432	0.4266683	-0.2411943	0.42666827
Compromising	-0.1010	0.226533231	-0.44596	0.658536	-0.56191102	0.3598596	-0.561911	0.35985962
Avoiding	0.1619	0.13556698	1.194377	0.240845	-0.11389503	0.4377312	-0.113895	0.43773116

SUMMARY OUTPUT CONFLICT ESCALATION

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.44879676
R Square	0.20141853
Adjusted R Square	0.08042134
Standard Error	0.51841429
Observations	39

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	5	2.236907732	0.447382	1.664655	0.170702076
Residual	33	8.868861498	0.268753		
Total	38	11.10576923			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	3.6148	0.845957591	4.273084	0.000154	1.893734469	5.3359618	1.89373447	5.33596177
Collaborating	-0.4243	0.260288109	-1.63017	0.112575	-0.95387385	0.1052464	-0.9538739	0.10524642
Accommodating	0.4315	0.20095266	2.147157	0.039222	0.022635712	0.8403182	0.02263571	0.84031823
Competing	-0.1176	0.157209428	-0.74794	0.459796	-0.43742751	0.2022625	-0.4374275	0.20226246
Compromising	-0.0996	0.21697732	-0.45895	0.649277	-0.54102584	0.3418615	-0.5410258	0.34186151
Avoiding	0.0341	0.129848322	0.262998	0.794187	-0.23002854	0.2983283	-0.2300285	0.29832825

SUMMARY OUTPUT RELATIONSHIP DETERIORATION

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.51522819
R Square	0.26546009
Adjusted R Square	0.15416617
Standard Error	0.52795285
Observations	39

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	5	3.32420697	0.664841	2.385216	0.059367975
Residual	33	9.198228928	0.278734		
Total	38	12.5224359			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	2.4695	0.861522774	2.866413	0.007175	0.716698867	4.2222614	0.71669887	4.22226137
Collaborating	-0.2482	0.265077276	-0.93637	0.355885	-0.78751431	0.2910932	-0.7875143	0.29109323
Accomodating	0.3945	0.204650085	1.927608	0.062548	-0.02187855	0.8108489	-0.0218785	0.8108489
Competing	0.2109	0.160102	1.317383	0.196784	-0.11481438	0.5366456	-0.1148144	0.53664555
Compromising	-0.3858	0.22096959	-1.7458	0.090151	-0.83533423	0.0637978	-0.8353342	0.06379779
Avoiding	0.1003	0.132237464	0.758527	0.453519	-0.16873344	0.3693448	-0.1687334	0.36934484

SUMMARY OUTPUT INACTION

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.50036086
R Square	0.25036099
Adjusted R Square	0.13677932
Standard Error	0.61649147
Observations	39

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	5	4.188731908	0.837746	2.204238	0.077418571
Residual	33	12.54203732	0.380062		
Total	38	16.73076923			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	2.4453	1.006001665	2.430754	0.020666	0.398617116	4.4920686	0.39861712	4.49206865
Collaborating	-0.6651	0.309531203	-2.14879	0.039082	-1.29486399	-0.035372	-1.294864	-0.0353721
Accomodating	-0.1760	0.238970266	-0.73632	0.46674	-0.66214641	0.3102309	-0.6621464	0.3102309
Competing	0.2009	0.186951389	1.074531	0.290379	-0.17947048	0.5812404	-0.1794705	0.58124044
Compromising	0.6636	0.258026581	2.571986	0.014802	0.138681726	1.1885998	0.13868173	1.18859977
Avoiding	0.1871	0.15441392	1.211815	0.234189	-0.12703634	0.5012786	-0.1270363	0.50127862

SUMMARY OUTPUT FURTHER DISAGREEMENT

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.76509966
R Square	0.58537749
Adjusted R Square	0.5225559
Standard Error	0.44257712
Observations	39

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	5	9.125884981	1.825177	9.318094	1.31385E-05
Residual	33	6.463858609	0.195875		
Total	38	15.58974359			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	1.5563	0.722205147	2.154916	0.038561	0.086953865	3.0256287	0.08695386	3.02562869
Collaborating	-0.7543	0.22221139	-3.39438	0.001805	-1.20636133	-0.302176	-1.2063613	-0.3021764
Accommodating	0.5189	0.171555935	3.024527	0.004795	0.169842461	0.8679088	0.16984246	0.8679088
Competing	0.0457	0.134211761	0.340426	0.735693	-0.22736664	0.3187451	-0.2273666	0.31874512
Compromising	0.4402	0.185236398	2.376502	0.023434	0.063348464	0.817081	0.06334846	0.81708103
Avoiding	0.2236	0.110853224	2.016964	0.051895	-0.00194562	0.4491195	-0.0019456	0.44911954